

IN THE CLAIMS

Current Listing Of Claims:

1.-12. (Cancelled)

13. (Currently Amended) An electroless plating structure on a metal-six copper (M6 Cu) pad, having a composition comprising:



wherein pM is a primary metal selected from at least one of Cu, Ag, Au, ~~Ce~~, Pd, Pt, Ni, Rh, and Ir;

wherein sM is a secondary metal selected from zero to at least one of Cr, Mo, W, Mn, Tc, and Re;

wherein B and P represent boron and phosphorus, respectively; and

wherein w has a range from about 0.5 to about 0.99, x has a range from about 0.0 to about 0.2, y has a range from about .01 to about 0.1, and z has a range from ~~about~~ 0.0 to about 0.02.

14. (currently amended) The electroless plating structure according to claim 13, ~~further including~~ wherein the composition of $pM_w sM_x B_y P_z$ ~~a metal compound~~ is selected from the group consisting of: CupMB, CupMBP, CupMCrB, CupMCrBP, CupMMoB, CupMMoBP, CupMWB, CupMWBP, CupMMnB, CupMMnBP, CupMTcB, CupMTcBP, CupMReB, CupMReBP, CupMNiB, CupMNiBP, CupMNiCrB, CupMNiCrBP, CupMNiMoB, CupMNiMoBP, CupMNiWB, CupMNiWBP, CupMNiMnB, CupMNiMnBP, CupMNiTcB, CupMNiTcBP, CupMNiReB, and CupMNiReBP.

15. (currently amended) The electroless plating structure according to claim 14, wherein pMCu ~~is substituted or accompanied by~~ comprises at least one of Cu, Ag and Au.

16. (currently amended) The electroless plating structure according to claim 13, ~~further including~~ wherein the composition of pM_w sM_x B_y P_z ~~a metal compound~~ is selected from the group consisting of: NipMB, NipMBP, NpMCrB, NipMCrBP, NipMMoB, NipMMoBP, NipMWB, NipMWBP, NipMMnB, NipMMnBP, NipMTcB, NipMTcBP, NipMReB, NipMReBP, NiCoB, NiCoBP, NiCoCrB, NiCoCrBP, NiCoMoB, NiCoMoBP, NiCoWB, NiCoWBP, NiCoMnB, NiCoMnBP, NiCoTeB, NiCoTeBP, NiCoReB, and NiCoReBP.

17. (currently amended) The electroless plating structure according to claim 16, wherein pMNi ~~is substituted or accompanied by~~ comprises at least one of Ni, Pd and Pt.

18. (currently amended) The electroless plating structure according to claim 13, ~~further including~~ wherein the composition of pM_w sM_x B_y P_z ~~a metal compound~~ is selected from the group consisting of: CoB, CoBP, CopMCrB, CoCrBP, CoMoB, CoMoBP, CoWB, CoWBP, CopMMnB, CoMnBP, CopMTcB, CoTeBP, CopMReB, CoReBP, NiCepMB, CoPdBP, CopMPdCrB, CoPdCrBP, CopMPdMoB, CoPdMoBP, CopMPdWB, CoPdWBP, CopMPdMnB, CoPdMnBP, CopMPdTcB, CoPdTeBP, Co and pMPdReB, and CoPdReBP.

19. (currently amended) The electroless plating structure according to claim 18, wherein ~~pMCo is substituted or accompanied by~~ comprises at least one of Co, Rh and Ir.

20. (currently amended) The electroless plating structure according to claim 13, wherein the primary metal is a metal combination selected from cobalt-nickel, cobalt-nickel-silver, cobalt-nickel-silver-copper, cobalt-silver, cobalt-silver-copper, cobalt-copper, cobalt-copper-nickel, nickel-silver, nickel-silver-copper, nickel-copper, and silver-copper.

21. (original) The electroless plating structure according to claim 13, wherein the primary metal is selected from MP, MB, MPB, MW, MWP, MWBP, MNiP, MNiWP, MReP, MReBP, and wherein M is a metal combination selected from cobalt-nickel, cobalt-nickel-silver, cobalt-nickel-silver-copper, cobalt-silver, cobalt-silver-copper, cobalt-copper, cobalt-copper-nickel, nickel-silver, nickel-silver-copper, nickel-copper, and silver-copper.

22. (New) The electroless plating structure according to claim 13, wherein the composition of $pM_w sM_x B_y P_z$ is selected from the group consisting of: CoRhB, CoIrB, CoRhIrB, CoRhMoB, CoIrMoB, CoRhIrMoB, CoRhWB, CoIrWB, and CoRhIrWB.

23. (New) An electroless plating structure on a conductive pad, having a composition comprising:



wherein pM is a primary metal selected from at least one of Cu, Ag, Au, Co, Pd, Pt, Ni, Rh, and Ir;

wherein sM is a secondary metal selected from zero to at least one of Cr, Mo, W, Mn, Tc, and Re;

wherein B and P represent boron and phosphorus, respectively; and

wherein w has a range from about 0.5 to about 0.99, x has a range from about 0.0 to about 0.2, y has a range from about .01 to about 0.1, and z has a range from a value approaching but not equal to 0.0 to about 0.02.

24. (new) The electroless plating structure according to claim 23, wherein the composition of $pM_w sM_x B_y P_z$ is selected from the group consisting of: pMBP, pMCrBP, pMMoBP, pMWBP, pMMnBP, pMTcBP, pMReBP, pMPdBP, pMPdCrBP, pMPdMoBP, pMPdWBP, pMPdMnBP, pMPdTcBP, and pMPdReBP.

25. (new) The electroless plating structure according to claim 24, wherein pM comprises at least one of Co, Rh and Ir.

26. (New) An electroless plating structure on a conductive pad, having a composition comprising:



wherein sM is a secondary metal selected from zero to at least one of Cu, Ag, Au, Pd, Pt, Ni, Rh, Ir, Cr, Mn, and Tc;

wherein Co, B and P represent cobalt, boron and phosphorus, respectively;

and

wherein w has a range from about 0.5 to about 0.99, x has a range from about 0.0 to about 0.2, y has a range from about .01 to about 0.1, and z has a range from a value approaching but not equal to 0.0 to about 0.02.

27. (new) The electroless plating structure of claim 26 wherein the composition of $\text{Co}_w \text{sM}_x \text{B}_y \text{P}_z$ is selected from the group consisting of: sMCoB, sMCoBP, sMCoCrB, sMCoCrBP, sMCoMoB, sMCoMoBP, sMCoWB, sMCoWBP, sMCoMnB, sMCoMnBP, sMCoTcB, sMCoTcBP, sMCoReB, and sMCoReBP.

28. (new) The electroless plating structure according to claim 27, wherein sM comprises at least one of Ni, Pd and Pt.